

REMARKS

Claims 11 and 12 are cancelled without prejudice. The features of claims 11 and 12 have now been included in independent claim 10. Additionally, claims 18-26 are also cancelled without prejudice. Thus, claims 1-10 and 13-17 remain for consideration in this application.

Claim 10 is rejected under 35 U.S.C. § 102(b) as being anticipated by Kanno (US 2003/0109184).

Claim 10 has been amended to include the features of claims 11 and 12. Accordingly, Kanno does not disclose the features of claim 10 which are set forth in cancelled claims 11 and 12, including the rotation angle sensor having a “ring-like shape”. Accordingly, it is submitted that the rejection of claim 10 as being anticipated by Kanno should be withdrawn.

Claims 1-3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan ‘495 (JP 02-279495) in view of Ferguson (USP 4,545,770).

Japan ‘495 is directed to hydraulic actuators provided for steering an outboard motor. The Office Action indicates that the steering cylinders do not project outside the profile, as claimed. However, we note in Fig. 6 of Japan ‘495, the lower cylinder is extended outside of the engine profile. Even in Fig. 9, which illustrates a turning position, the mounting portion of the lower hydraulic cylinder is still projecting outside of the engine profile.

Ferguson discloses an outboard motor mounting arrangement having swivel brackets. For example, in Fig. 7, swivel bracket assembly 51 includes rear covers 401 and 408. Rear cover 401 essentially covers up the steering cylinder-piston assembly 121. It is the position of the Office Action that it would be obvious to combine the box of Ferguson with the structure of Japan ‘495.

The steering system of claim 1 includes a swivel case, which is recited as follows:

a swivel case rotatably accommodating the swivel shaft, the swivel case being formed with a recess having a box-like shape to accommodate the actuator therein in such a manner that the actuator does not project outside a profile of the outboard motor, obtained by looking down the outboard motor from above in the vertical direction, regardless of a steered angle of the outboard motor.

Thus, a swivel case is formed with a recess to accommodate the actuator therein. Further, the actuator does not project outside of a profile of the outboard motor, when viewed from above, regardless of a steering angle of the outboard motor. An example of this feature is illustrated in Figs. 4, 6 and 7, in which the actuator 40 does not project outside of the profile of the outboard motor, regardless of the steering angle.

In Japan '495, the actuators do project outside of the profile of the outboard motor. As illustrated in both Figs. 6 and 9, the actuators, the end of cylinders 18 project outside of the profile of the outboard motor, when viewed from above.

While the Office Action suggests that it would be obvious to combine the box of Ferguson with the structure of Japan '495, it is submitted that even such a combination would not render claim 1 obvious, since the actuators of Japan '495 project outside of the profile of the outboard motor. Accordingly, it is respectfully requested that the rejections of claims 1-3 over Japan '495 in view of Ferguson be withdrawn.

Claims 4 and 5 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan '495 in view of Ferguson, and further in view of Kanno.

Claims 4 and 5 are directed to a rotation angle sensor and a controller. Specifically, none of the references shows a recess for the rotation angle sensor to be installed in, nor do any of these references disclose a rotation angle sensor installed around an “outer periphery” of the swivel shaft.

Furthermore, claims 4 and 5 are dependent from independent claim 1 and limited to the additional features set forth therein. In view of the remarks above in which claim 1 is distinguished from the cited references, claims 4 and 5 are also distinguishable over the cited references for the same reasons as claim 1.

Claims 6 and 7 are rejected under 35 U.S.C. §103(a) as being unpatentable over Japan '495 in view of Ferguson and Kanno, and further in view of Alsobrooks (US 2004/0173734).

Alsobrooks is directed to a rapid high resolution position sensor for auto steering. As illustrated in Fig. 6A and 6B, the hub 200 does not share a center rotation equal to the center rotation of the cover 104. Furthermore, the device of Alsobrooks does not contain magnets as required in claim 7. In Alsobrooks, the code disk 300 has a series of cutouts 302 around its circumference. Alsobrooks provides for light emitting diode 502 to project light through the cutouts 302 for sensing the rotational position. Additionally, a single magnet 402 is provided for actuating hall sensors of the sensor panel 504. This is not the same as the “magnets” of claim 7.

Accordingly, since Alsobrooks does not have a center of rotation of the angle sensor being equal to a center of rotation of the “swivel shaft”, or the equivalent of the swivel shaft in

Alsobrooks, claim 6 is not met. Additionally, as stated above, Alsobrooks does not contain the same magnets as recited in claim 7.

Additionally, claims 6 and 7 are both indirectly dependent from independent claim 1. Accordingly, claims 6 and 7 are not obvious for the same reasons for the same reasons that claim 1 is not obvious. Accordingly, it is respectfully requested that the rejection of claims 6 and 7 over Japan '495 in view of Ferguson and Kanno, and further in view of Alsobrooks, be withdrawn.

Claims 8 and 9 are rejected under 35 U.S.C. §103 as being unpatentable over Japan '495 in view of Ferguson and further in view of Kazuyoshi (USP 6,155,797).

Kazuyoshi is simply cited to show a variable displacement fluid supply which has a movable orifice. Claims 8 and 9 are dependent from claim 1 and limited to the additional features set forth therein. Accordingly, claims 8 and 9 are patentable for the same reasons as claim 1.

Claims 11 and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kanno in view of Alsobrooks.

Claims 11 and 12 have been cancelled without prejudice. The features of claims 11 and 12 have been included into amended claim 10. As noted above, in Figs. 6A and 6B, the hub 200 does not share a center of rotation equal to the center of rotation of the cover 104. Accordingly, similar to the argument set forth above with regard to claims 6 and 7, Alsobrooks does not show the feature of amended claim 10 (now cancelled claims 11 and 12) that the, "center of rotation angle sensor is made equal to a center of rotation of the swivel shaft." Furthermore, Alsobrooks

does not disclose the magnets now required by amended claim 10. Accordingly, it is submitted that the rejection of claims 11 and 12 should be withdrawn.

Claims 13-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kanno in view of Japan '495.

Claims 13-15 are directly or indirectly dependent from claim 10, and limited to the additional features set forth therein. Accordingly, if claim 10 is allowable, then claims 13-15 will also be allowable.

Claims 16 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Kanno in view of Japan '495.

Claims 16 and 17 are also dependent, either directly or indirectly from claim 10, and limited to the additional features set forth therein. Accordingly, if claim 10 is allowable, then claims 16 and 17 will also be allowable.

Claims 18-20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Japan '495 in view of Kazuyoshi.

Claims 21 and 22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Japan '495 in view of Kazuyoshi and Ferguson.

Claim 23 is rejected under 35 U.S.C. §103(a) as being unpatentable over Japan '495 in view of Kazuyoshi and Kanno.

Claim 24 is rejected under 35 U.S.C. §103(a) as being unpatentable over Japan '495 in view of Kanno.

Claims 25 and 26 are rejected under 35 U.S.C. §103(a) as being unpatentable over Japan '495 in view of Kanno and Alsobrooks.

Claims 18-26 have been cancelled without prejudice. Accordingly, the above rejections of claims 18-26 should also be withdrawn.

In view of the amendments to the claims, and the remarks set forth above, Applicants submit that the rejections have been overcome. Accordingly, it is respectfully requested that the rejections be withdrawn, and that the application be passed onto issue.

CONCLUSION

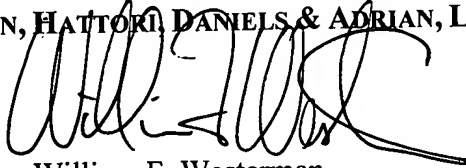
In view of the foregoing amendments and accompanying remarks, it is submitted that all pending claims are in condition for allowance. A prompt and favorable reconsideration of the rejection and an indication of allowability of all pending claims are earnestly solicited.

If the Examiner believes that there are issues remaining to be resolved in this application, the Examiner is invited to contact the undersigned attorney at the telephone number indicated below to arrange for an interview to expedite and complete prosecution of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



William F. Westerman
Attorney for Applicants
Registration No. 29,988
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

WFW/dlt